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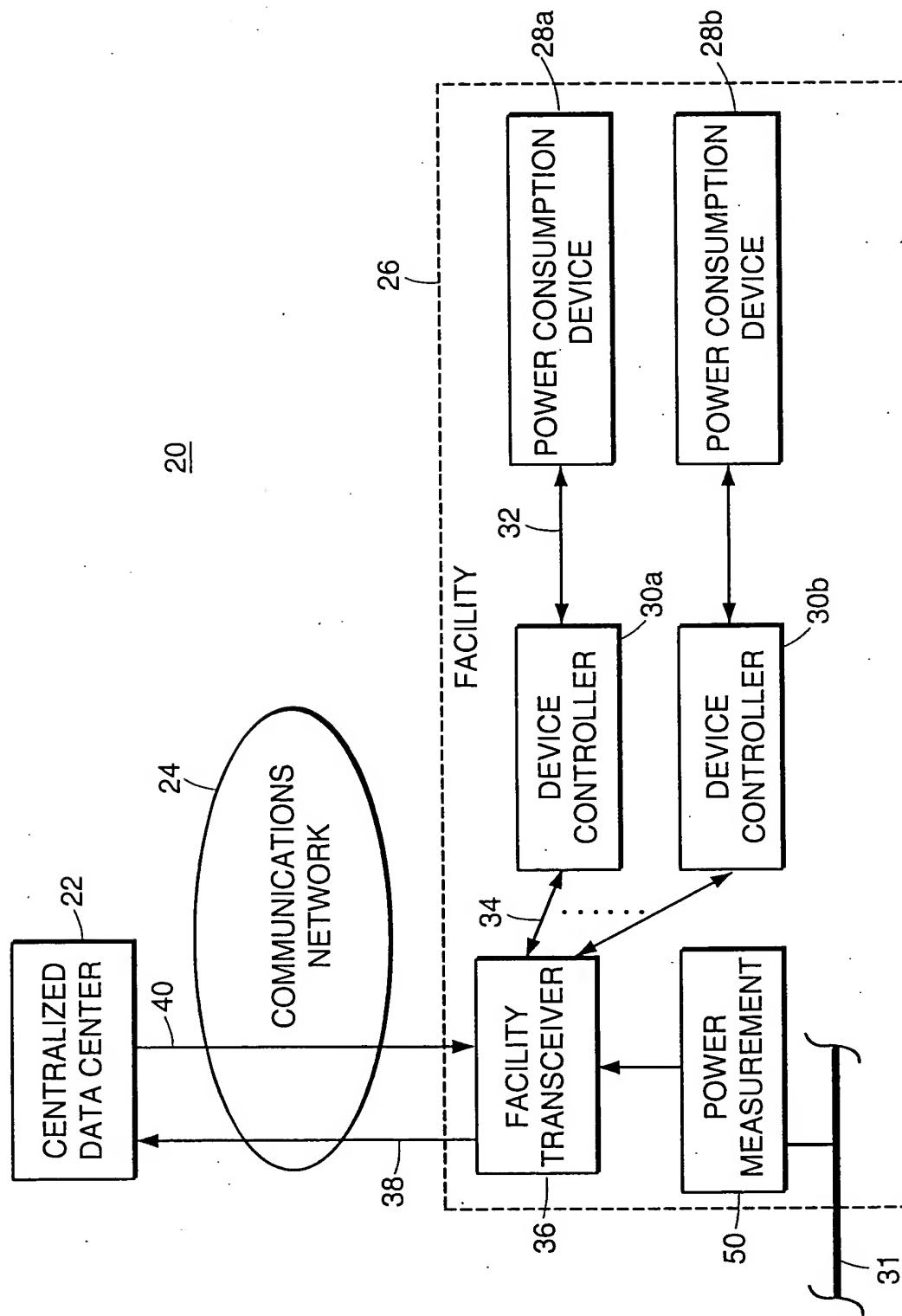
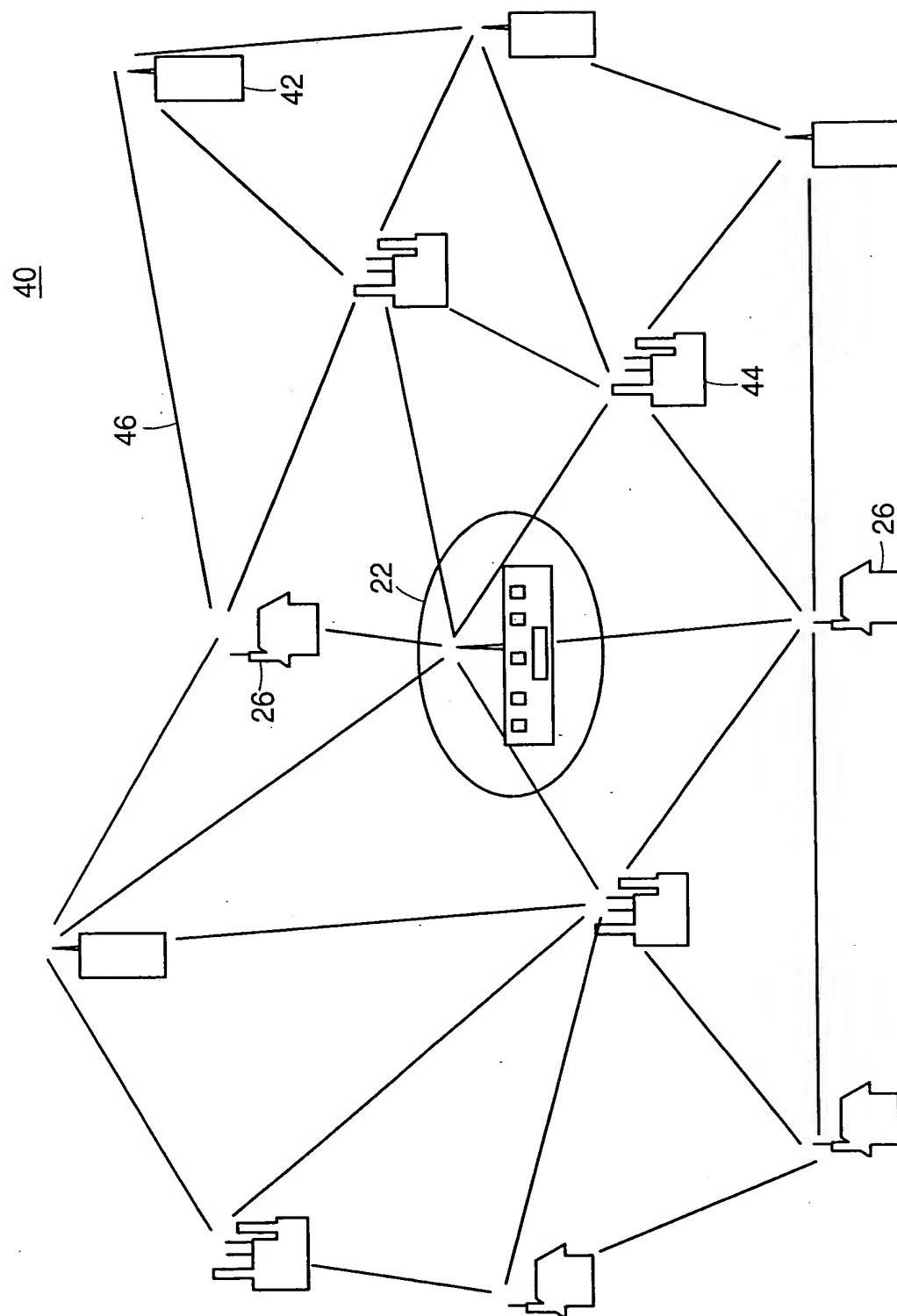


FIG. 1

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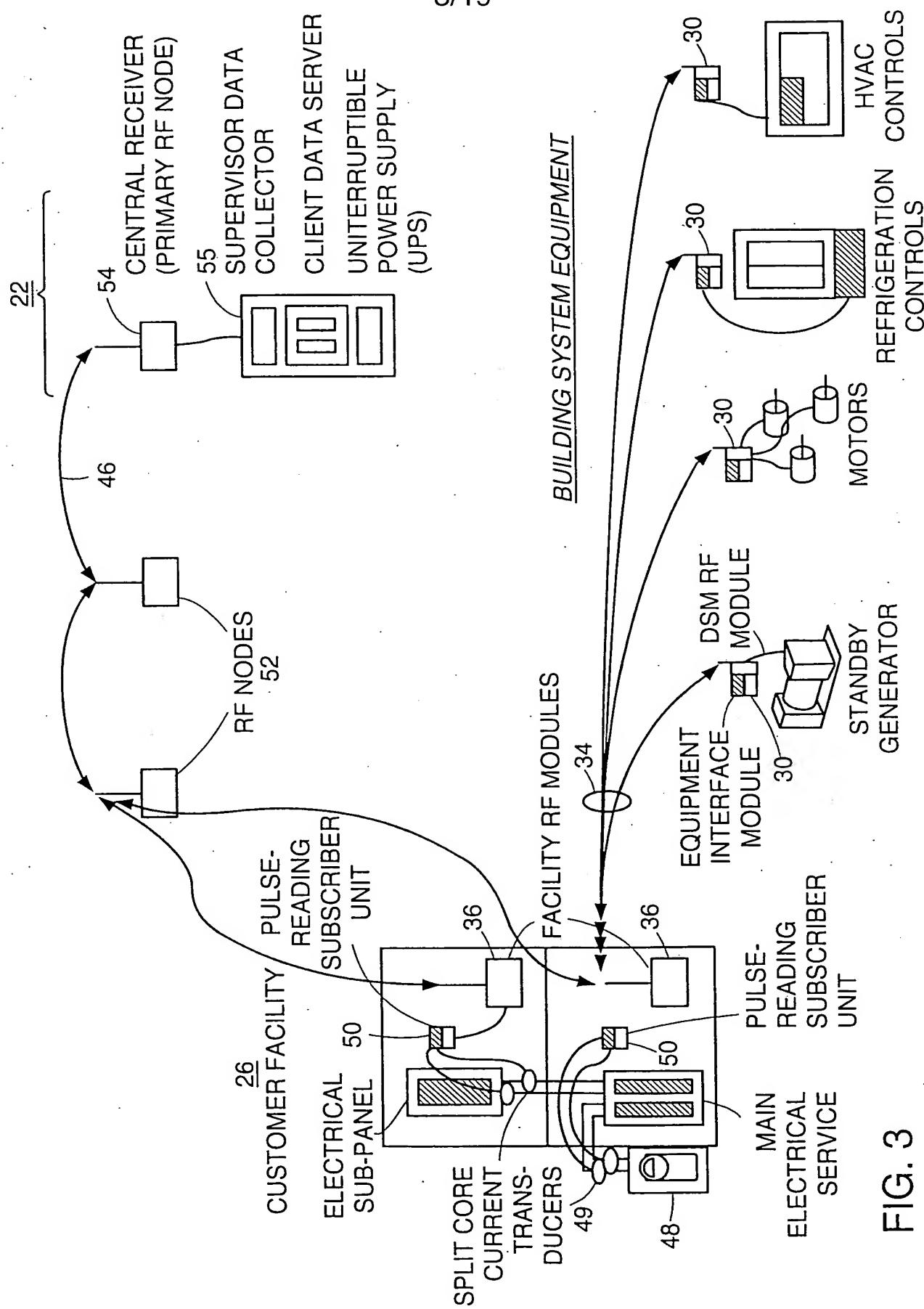


FIG. 3

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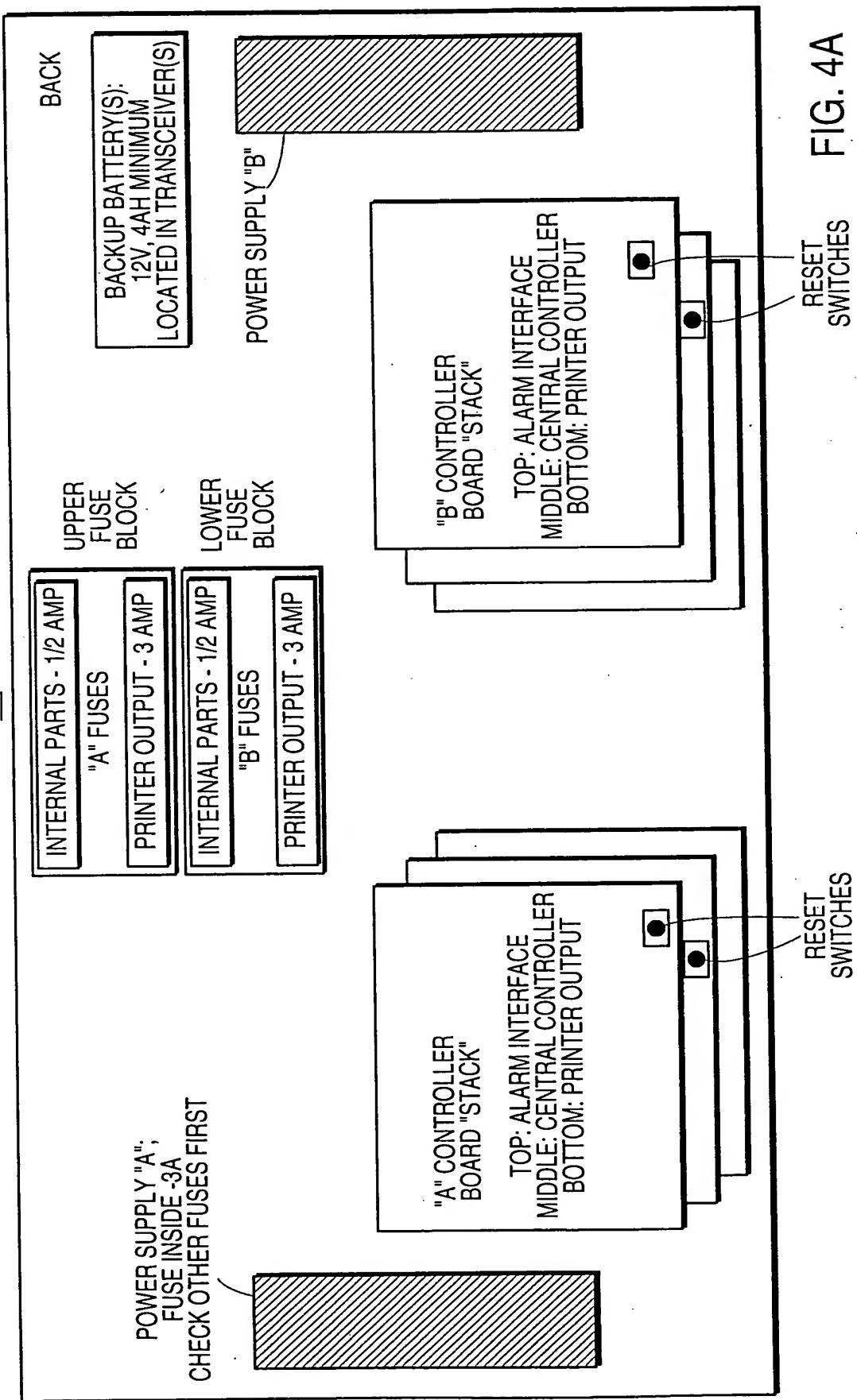
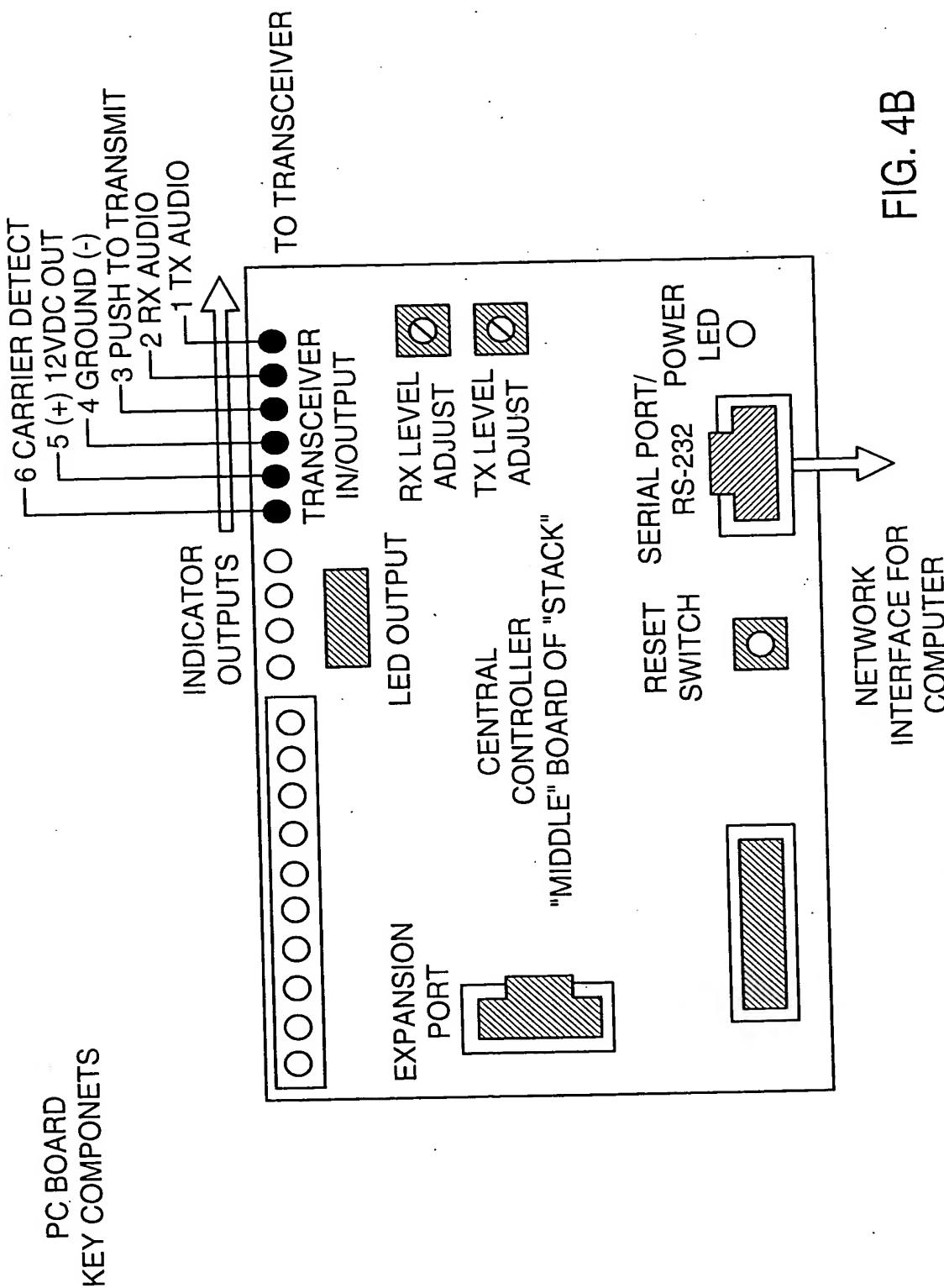
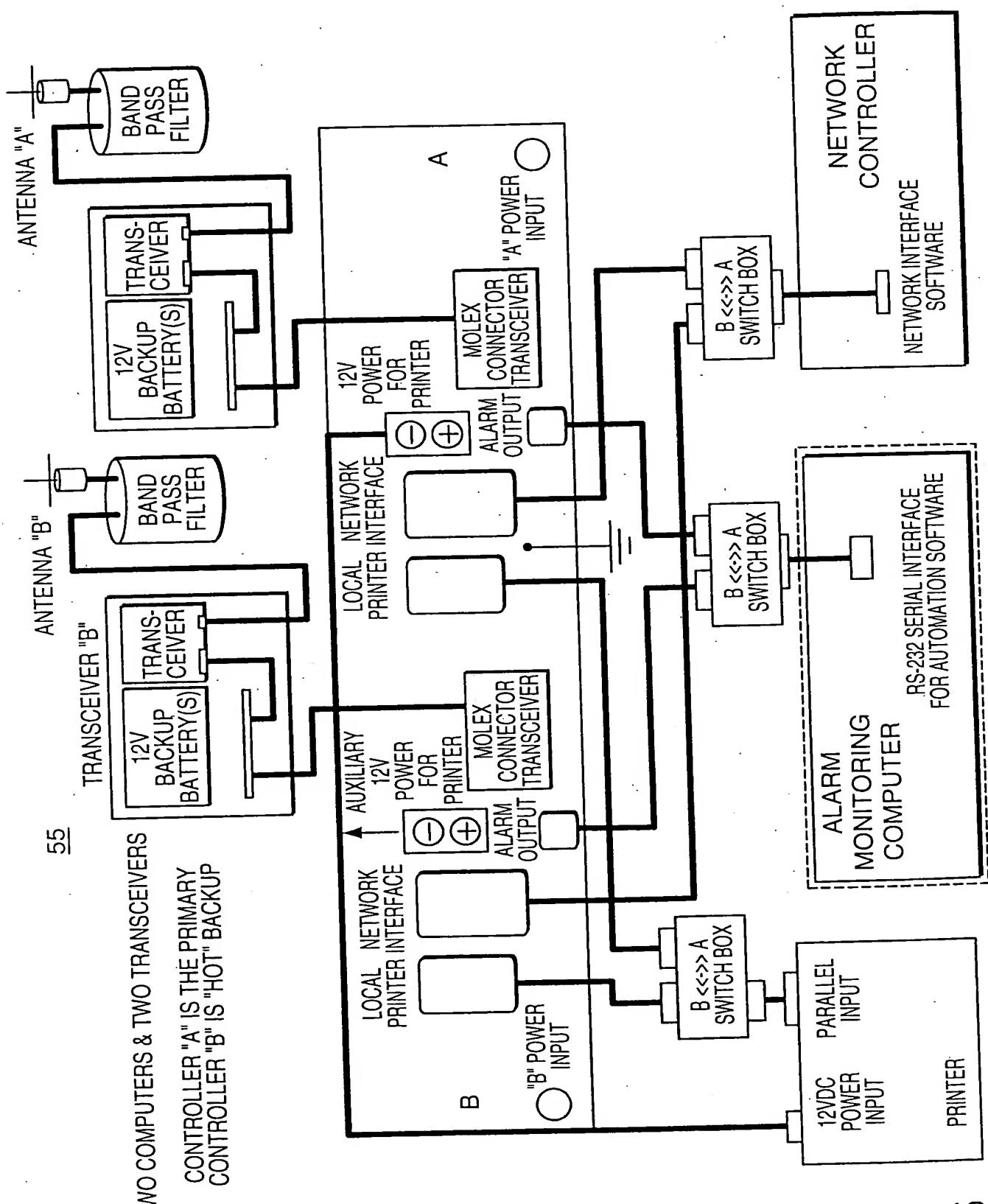
55

FIG. 4A

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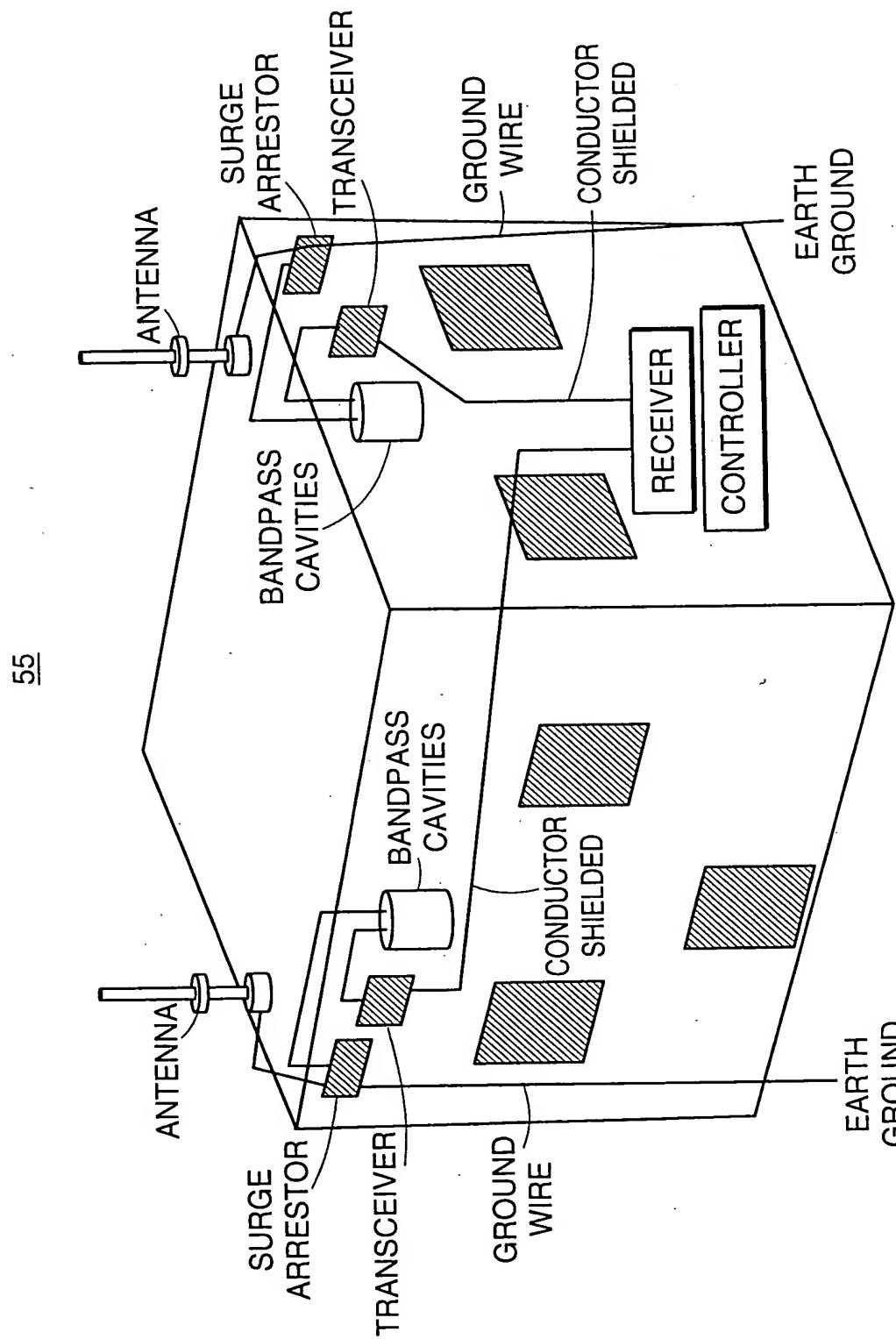
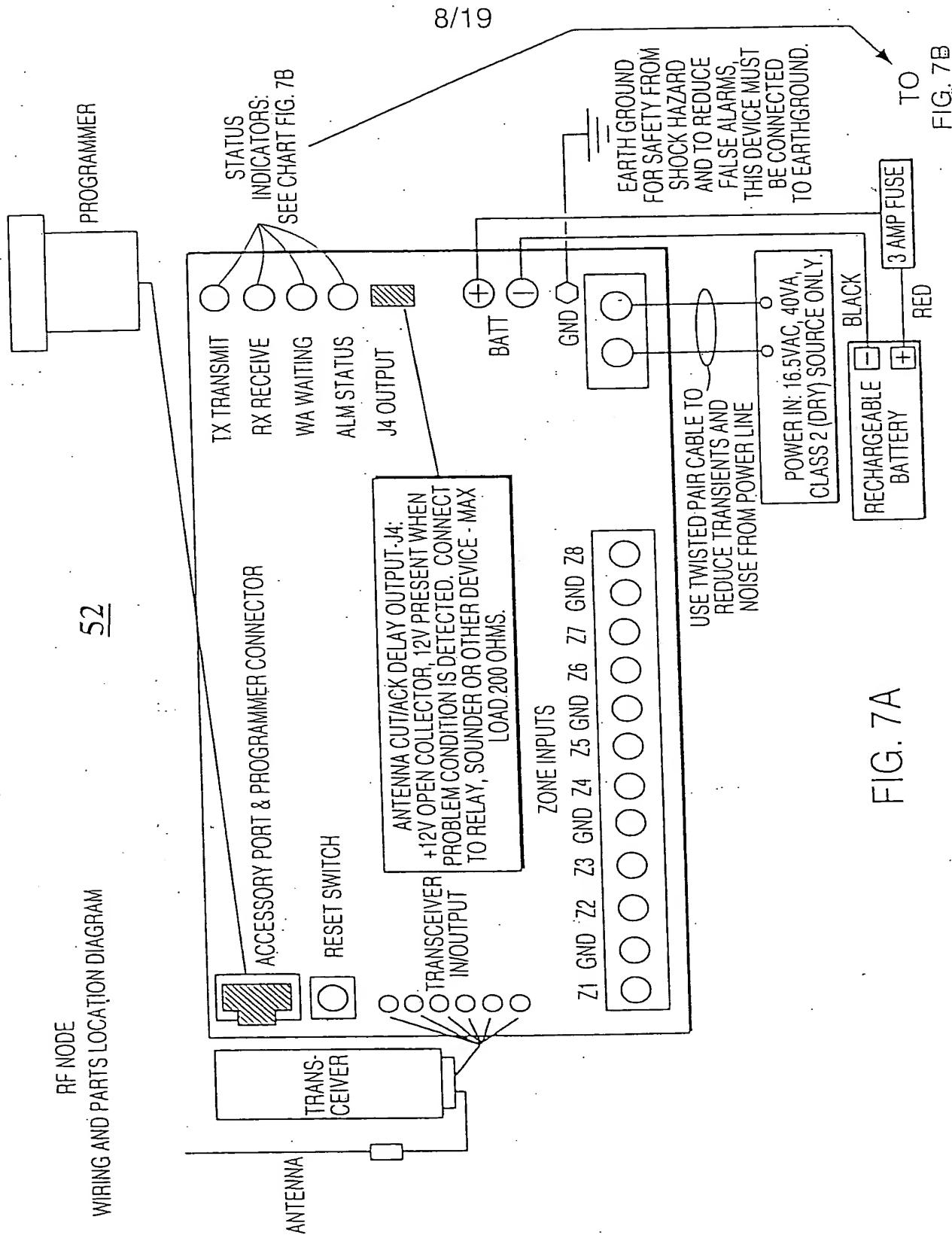


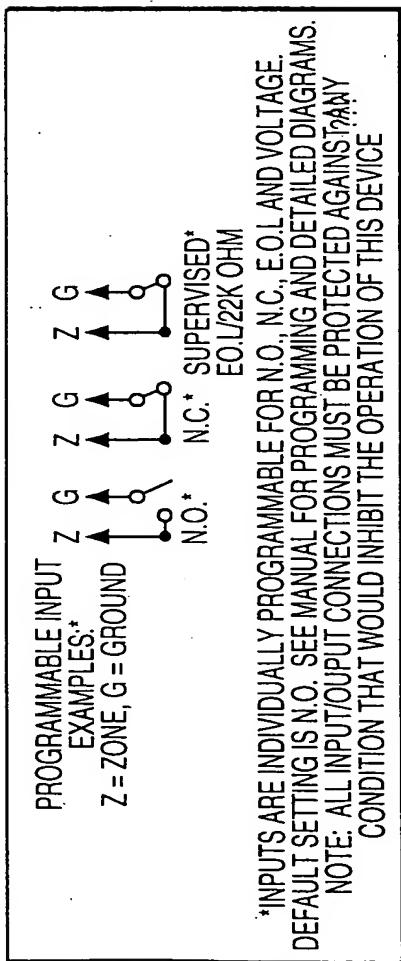
FIG. 6

RF NODE
WIRING AND PARTS LOCATION DIAGRAM

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* INPUTS ARE INDIVIDUALLY PROGRAMMABLE FOR N.O., N.C., E.O.L. AND VOLTAGE. DEFAULT SETTING IS N.O. SEE MANUAL FOR PROGRAMMING AND DETAILED DIAGRAMS. NOTE: ALL INPUT/OUTPUT CONNECTIONS MUST BE PROTECTED AGAINST STANDBY CONDITION THAT WOULD INHIBIT THE OPERATION OF THIS DEVICE

FROM
FIG. 7A

STATUS INDICATORS:
LED'S ON UPPER RIGH

MODEL RF NODE
ELECTRICAL RATING: 12VDC, 175mA STANDBY, 800mA TRANSMIT
ONBOARD FUSE: SELF RESETTING / NOT USER SERVICEABLE
IN-LINE BATTERY FUSE: 3 AMPERE
RECHARGEABLE BATTERY REQ: 12V, 4 TO 7 AH
LOW BATTERY CONDITION IS REPORTED TO THE CENTRAL STATION.

STATUS INDICATORS:
LEDS ON UPPER RIGHT EDGE OF THE BOARD

⑥	O TX	TX TRANSMIT
	O RX	RX RECEIVE
	O WA	WA WAITING
	O ALM	ALM STATUS
	RX	INDICATES RADIO RECEIVE (INCLUDES ANY RADIO OR ACTIVITY ON THIS FREQUENCY)
	TX	INDICATES RADIO TRANSMIT
	WA	WA - STEADY ON = WAITING FOR ACKNOWLEDGEMENT OF LAST TRANSMISSION; BLINKING = NOT ON NETWORK OFF = NORMAL
	AL	AL - ALERT / TROUBLESHOOTING INDICATOR, "BLINK" CODES AS FOLLOWS:
	-	STEADY BLINK - SYSTEM OK;
	--	SHORT-SHORT BLINK - LOW BATTERY;
	---	SHORT-LONG BLINK - AN INPUT ZONE IS IN ALARM;
	----	SHORT-SHORT-LONG BLINK - LOW BATT & ZONE IN ALARM;
	-----	STEADY/NO BLINK - SELFTEST FAILURE (OTHER THAN LOW BATT)

FIG. 7B

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RF NODE
WIRING AND PARTS LOCATION DIAGRAM

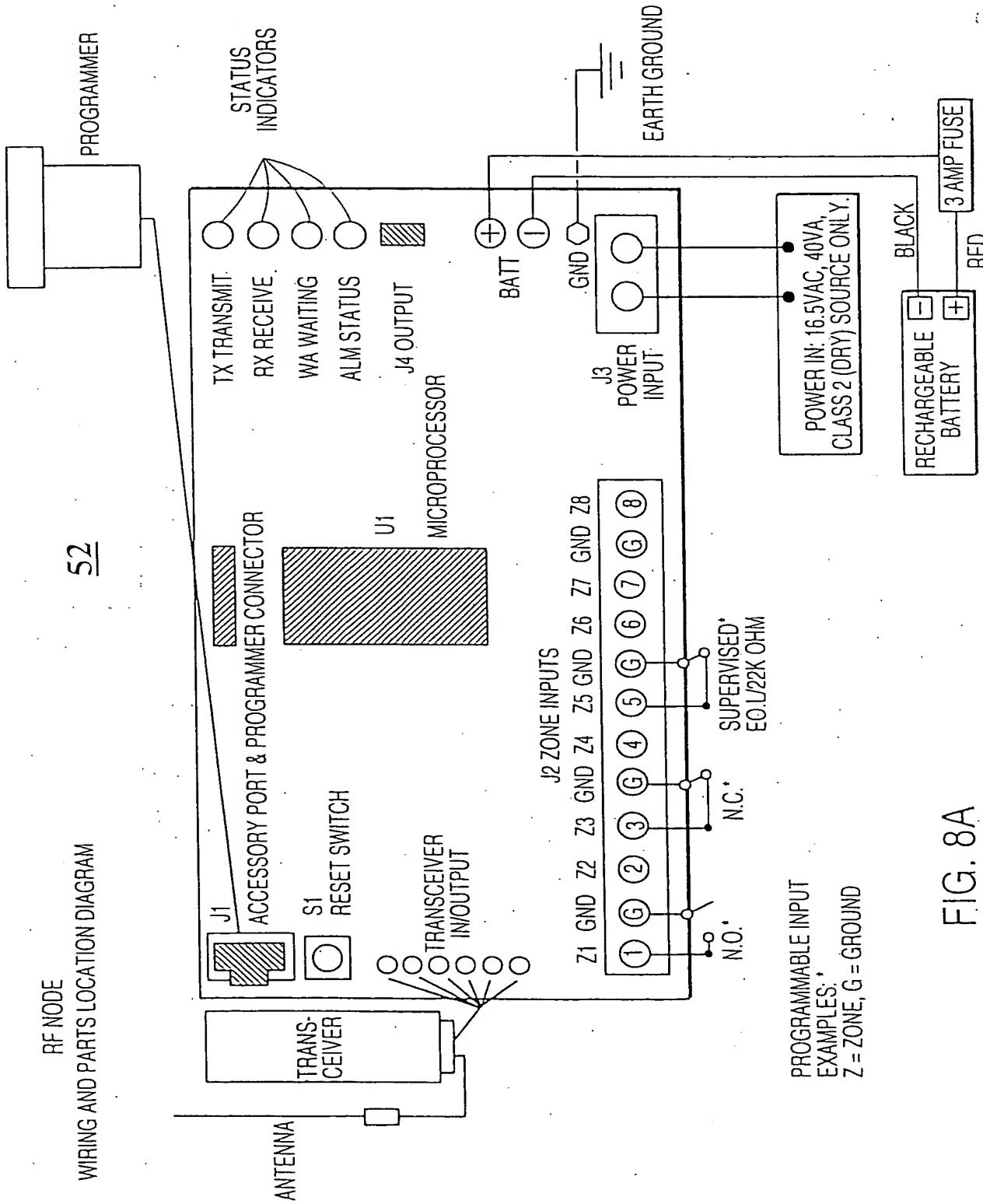
52

FIG. 8A

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*8 INPUTS ARE INDIVIDUALLY PROGRAMMABLE FOR N.O., N.C., E.O.L. AND VOLTAGE (4-30VOLTS).
DEFAULT SETTING IS E.O.L. SEE MANUAL FOR PROGRAMMING AND DETAILED DIAGRAMS.
NOTE: ALL INPUT/OUTPUT CONNECTIONS MUST BE PROTECTED AGAINST ANY CONDITION THAT WOULD
INHIBIT THE OPERATION OF THIS DEVICE.
*DEFAULT SETTING IS FOR SUPERVISED / E.O.L. ZONE INPUTS. RESISTORS MUST BE INSTALLED ON ALL ZONE
INPUTS, EVEN WHEN NOT USED.

INPUT / OUTPUT CONNECTIONS
PROGRAMMER / ACCESSORY PORT - CONNECTS TO PROGRAMMER.
J1 ZONE INPUTS TERMINAL BLOCK: GROUND (-): 8 ZONE INPUTS (DEFAULT = SUPERVISED END OF LINE RESISTOR (E.O.L.)
J2 POWER INPUT TERMINAL BLOCK: 16.5 VAC
J3 ANTENNA OUT / ACKNOWLEDGEMENT DELAY OUTPUT - SHOULD THE UNIT NOT RECEIVE AN ACKNOWLEDGEMENT TO ANY MESSAGE FOR A TIME
LONGER THAN THE PROGRAMMED PERIOD, THE OUTPUT GENERATES 12 VOLTS BETWEEN THE PINS TO SIGNAL A PROBLEM. CONNECT TO A RELAY, SOUNDER OR
ALTERNATE COMMUNICATOR TO ANNOUNCE THE PROBLEM (200 OHMS MAX LOAD).

CONTROLS
S1 RESET SWITCH - INITIALIZES CONTROLLER

UPGRADABLE INTEGRATED CIRCUIT
U1 MICROPROCESSOR, 40 PIN DIP; THIS CHIP IS MOUNTED IN A SOCKET, AND MAY BE REPLACED FOR UPGRADES OR SPECIAL APPLICATIONS.

FIG. 8B

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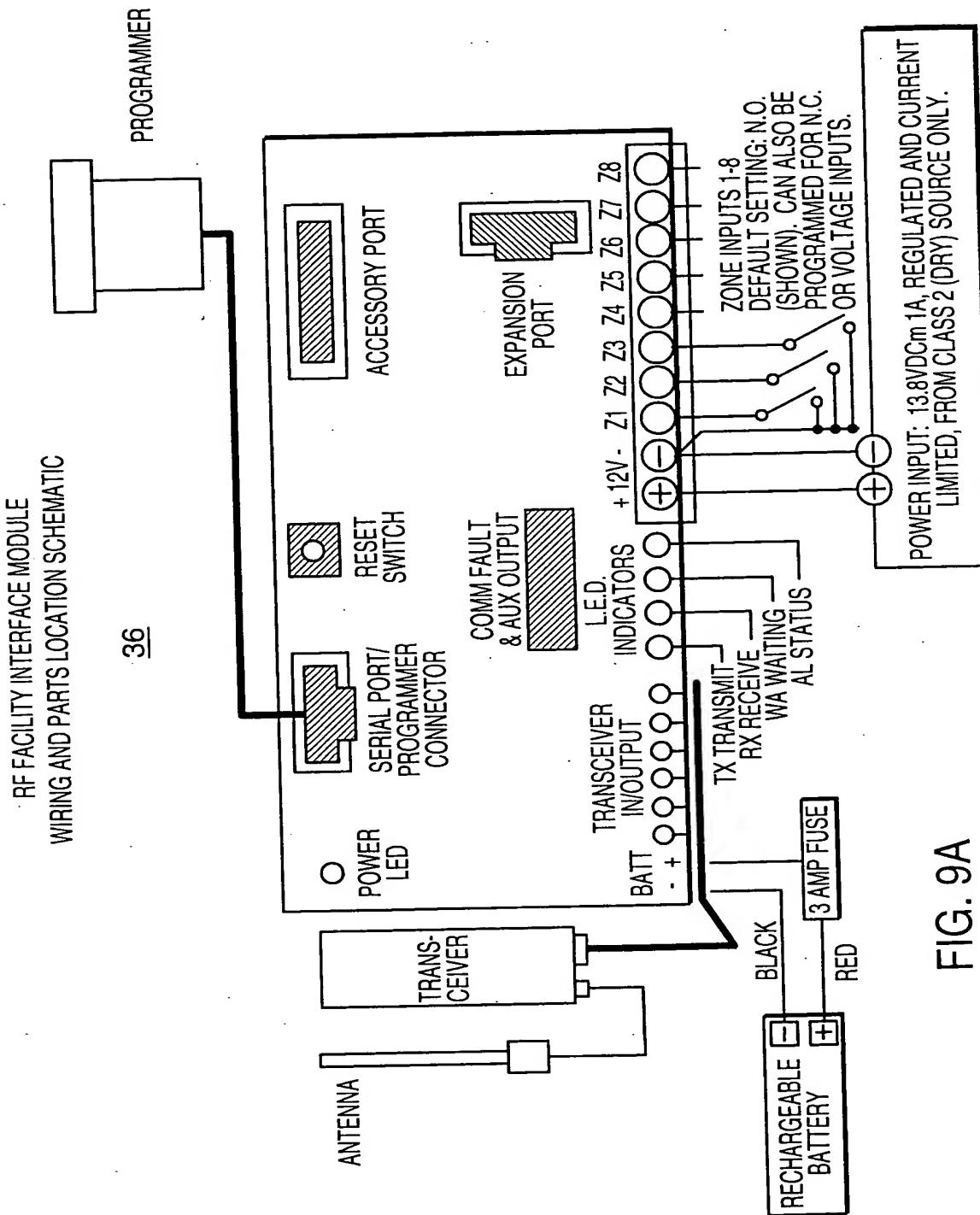


FIG. 9A

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ELECTRICAL RATING: 13.8VDC, 80ma STANDBY,1000ma TRANSMIT
ONBOARD FUSE: SELF RESETTING
IN-LINE BATTERY FUSE: 3 AMPERE
RECHARGEABLE BATTERY REQ: 12V, 4 TO 7 AH
LOW BATTERY CONDITION IS REPORTED TO THE CENTRAL STATION.

STATUS INDICATORS

RX,TX - INDICATE RADIO RECEIVE (RX) OR TRANSMIT (TX)
WA - STEADY ON = WAITING FOR ACKNOWLEDGEMENT OF LAST TRANSMISSION;
BLINKING = NOT ON NETWORK
STEADY OFF = NORMAL

AL - ALERT / TROUBLESHOOTING INDICATOR, "BLINK" CODES AS FOLLOWS:

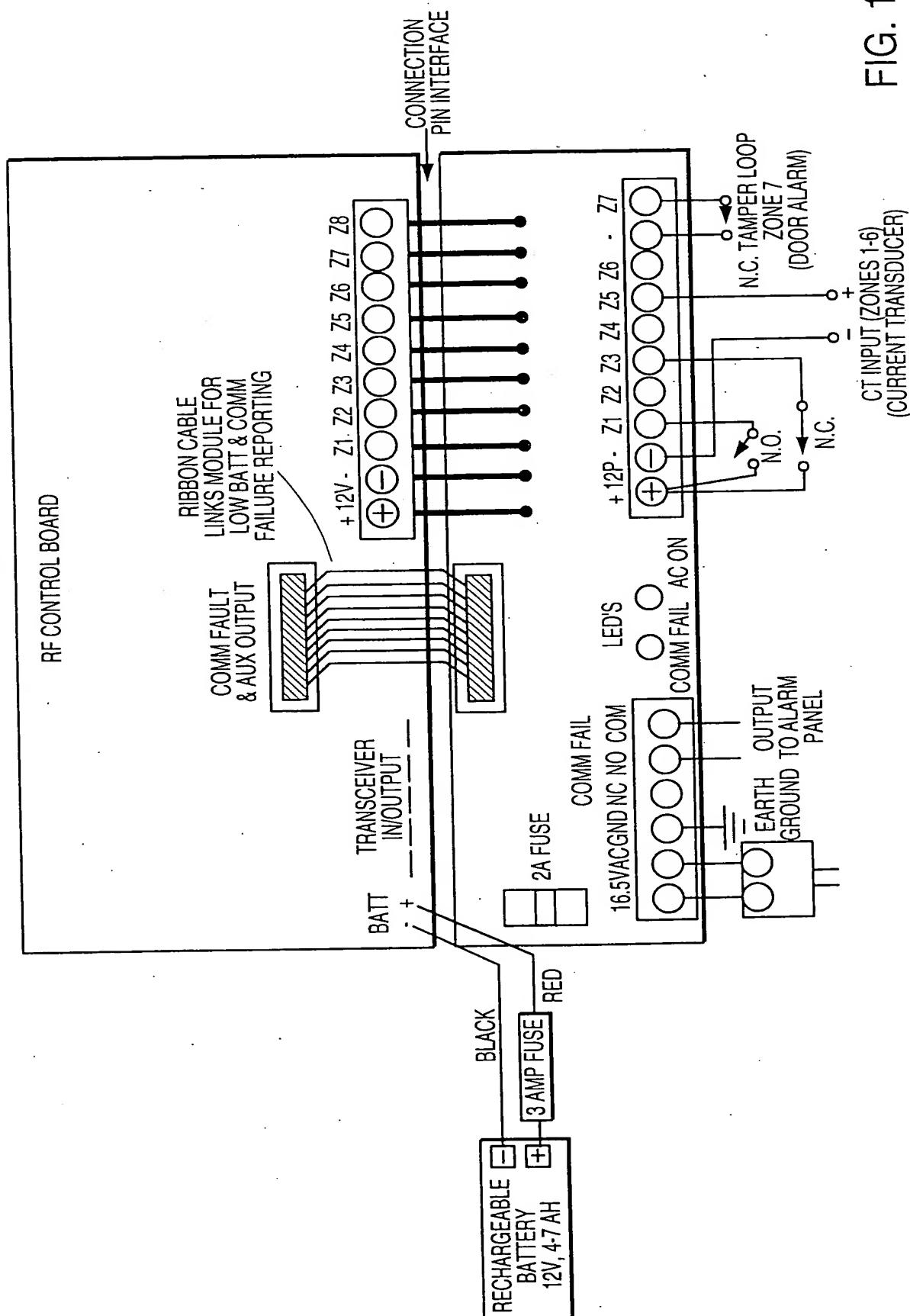
-	-	-	STEADY BLINK - SYSTEM OK;
--	--	--	SHORT-SHORT BLINK - LOW BATTERY;
--	--	--	SHORT-LONG BLINK - AN INPUT ZONE IS IN ALARM;
--	--	--	SHORT-SHORT-LONG BLINK, LOW BATT AND ZONE IN ALARM;
STEADY			NO BLINK - SELFTEST FAILURE (OTHER THAN LOW BATT)

PWR - INDICATES UNIT HAS POWER

FIG. 9B

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EIG. 10

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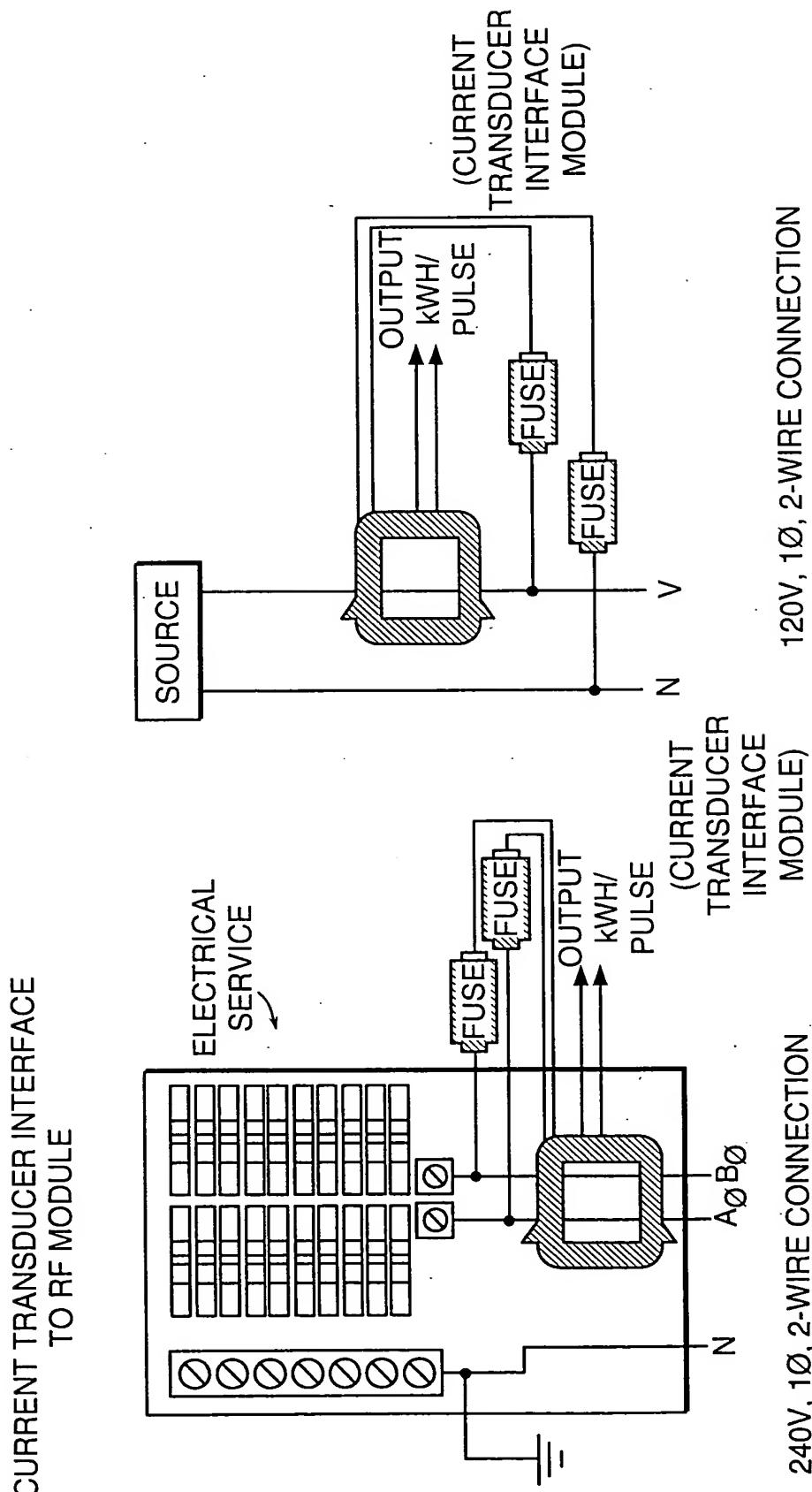
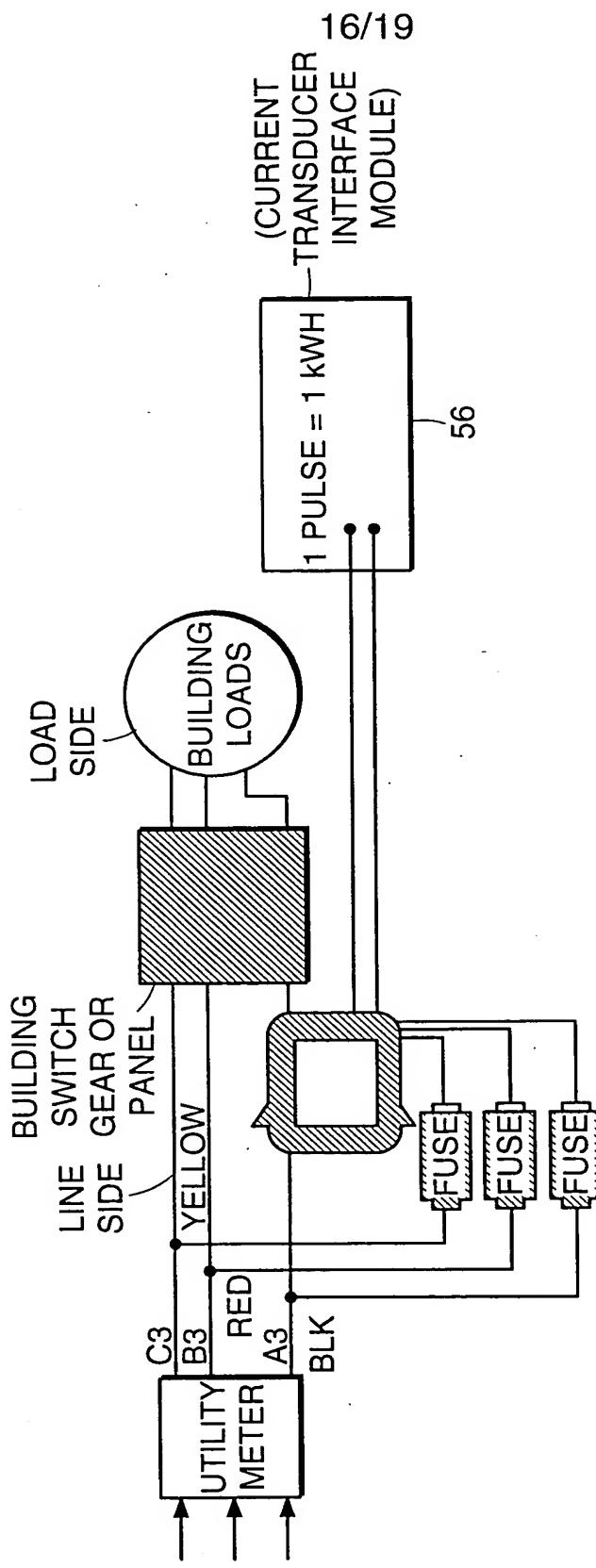


FIG. 11A FIG. 11B

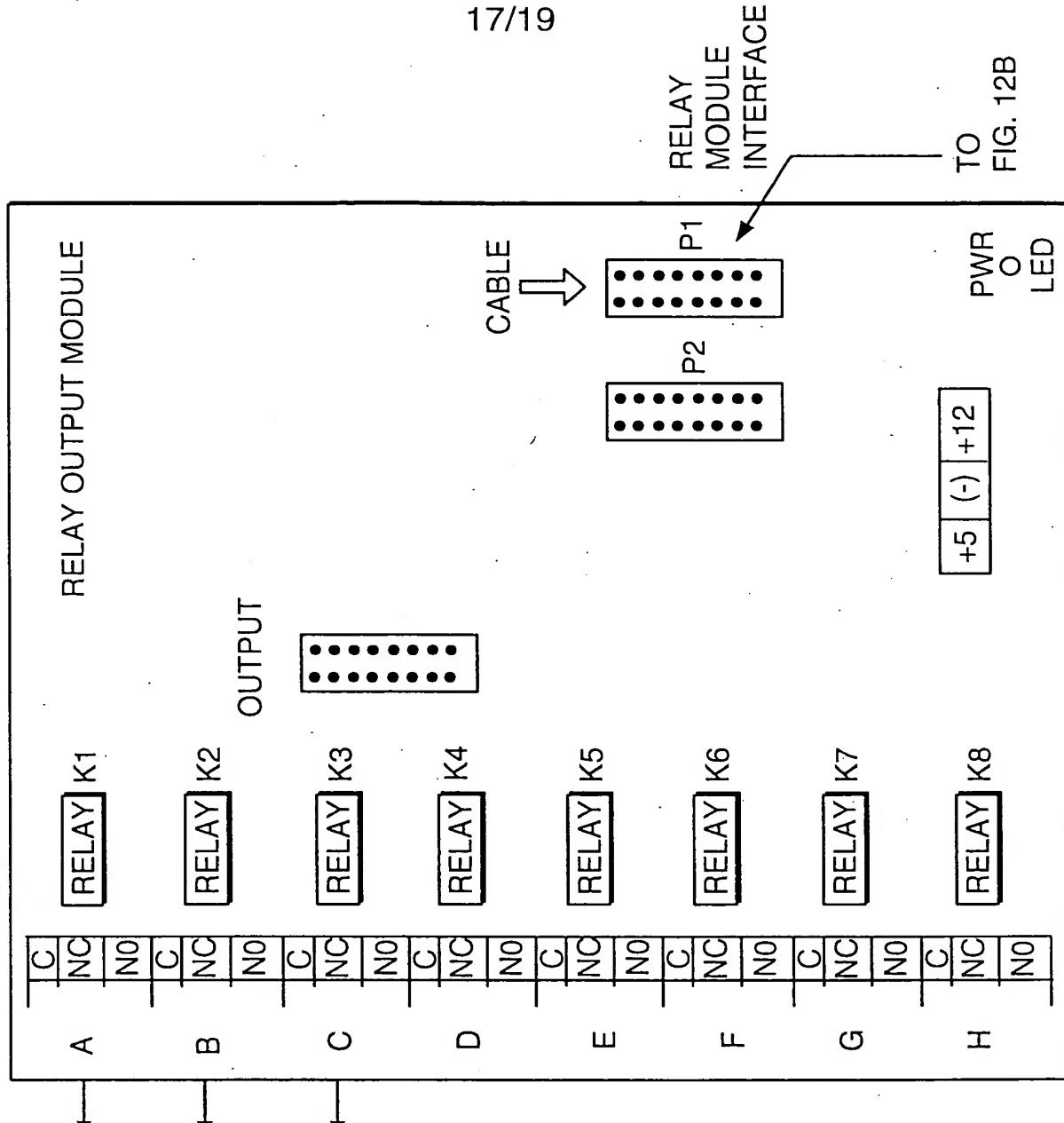
240/480 VAC, 3Ø, BALANCED LOAD, 3, 4-WIRE CONNECTION



SCHEMATICALLY DEMONSTRATE HOW ENERGY DATA OF DIFFERENT ELECTRICAL PHASE TYPES CAN BE INTEGRATED TO THE RF MODULE VIA A PULSE OUTPUT FROM CT TRANSDUCER.

FIG. 11C

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2-WAY RF EQUIPMENT INTERFACE MODULE

RELAYS WOULD BE WIRED
TO INTERFACE WITH
EXISTING AUTOMATION SYSTEM,
INDIVIDUAL CONTRACTORS
TO EQUIPMENT, THERMOSTATS,
EMERGENCY GENERATOR, ETC.

FIG. 12A

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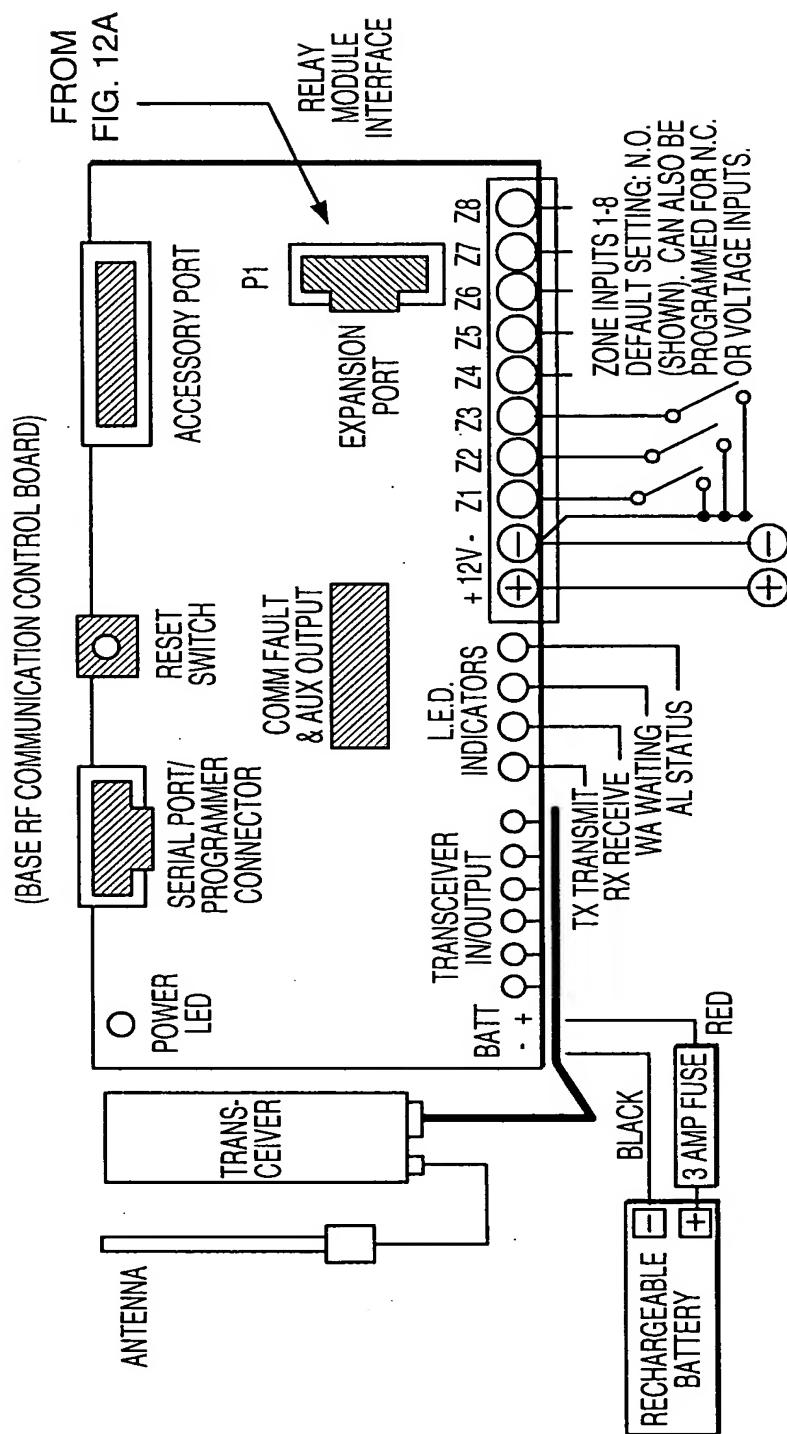
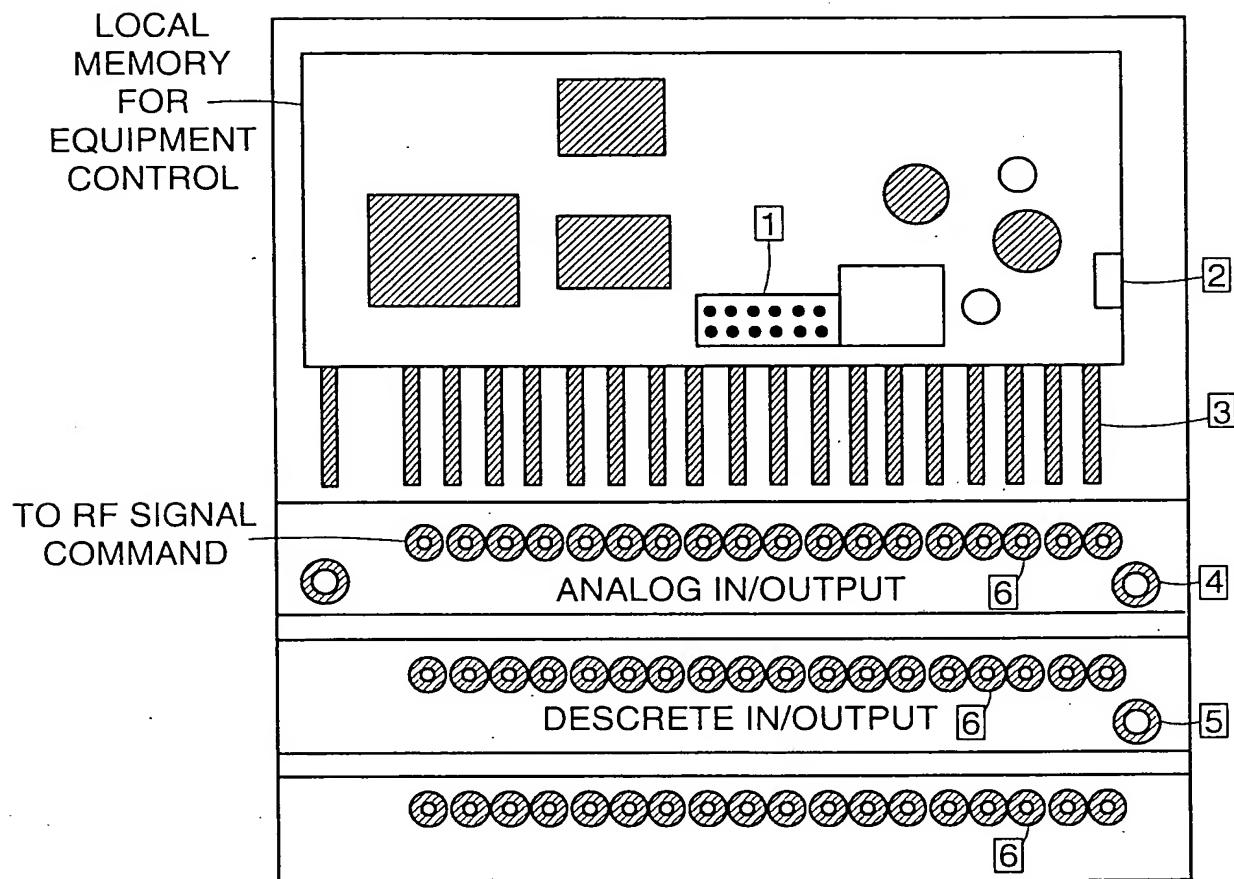


FIG. 12B

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RF INTERFACE TO LOCAL EQUIPMENT CONTROLLER



LABEL	DESCRIPTION
1	INTERNAL INTERFACE (ATI) CONNECTOR LOCAL LOGIC CONTROLLER
2	GROUND CONTACT FOR THE ADAPTER
3	LED STATUS DISPLAY
4	MOUNTING HOLES FOR PANEL MOUNT
5	GROUNDING SCREW
6	SOCKETS FOR THE TERMINAL CONNECTORS

FIG. 13